

Application No.: 10/823,456  
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**Amendments to the Claims:**

Please amend claims 1, 32, 49, and 79. Please cancel claims 22, 23, 42 and 43.

This listing of claims will replace all prior versions and listings of claims in the subject application, and please amend the claims as follows:

Claim 1. (Currently amended): An implantable graft comprising:

a flat-woven tubular portion having opposed first and second tubular ends with a contiguous generally spherical or oblong bulbous woven section therebetween, said bulbous woven section having opposed first and second open ends, the first bulbous end being contiguous with said first tubular end said second bulbous end being contiguous with said second tubular end, the first tubular end having a first number of warp yarns interlaced with a plurality of fill yarns in a woven pattern to define a first flat-woven tubular diameter, the second end having a second number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a second flat-woven tubular diameter, and said bulbous section having a third number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a third flat-woven tubular diameter, wherein the first bulbous end includes a textile portion having an increased number of warp yarns at the rate of at least three or more warp yarns for every two of said yarns, while the second bulbous end includes a textile portion having a decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of said fill yarns;

wherein said third number of warp yarns is greater than either of said first or said second number of warp yarns; and further wherein said third number of warps yarns are engagingly interlaced at said first bulbous end and disengagingly interlaced at second bulbous end to provide a seamless implantable graft having a third diameter being greater than either of said first or said second diameters.

Claim 2. (Original): The implantable graft of claim 1, wherein said second number of warp yarns is equal to said first number of warp yarns.

Claim 3. (Original): The implantable graft of claim 1, wherein said second diameter is equal to said first diameter.

Claim 4. (Original): The implantable graft of claim 1, wherein said third diameter is from about 2 mm to about 20 mm greater than said first or said second diameter.

Claim 5. (Original): The implantable graft of claim 4, wherein said first diameter or said second diameter is from about 10 mm to about 50 mm.

Claim 6. (Original): The implantable graft of claim 1, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are selected from the group consisting of a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave and combinations thereof.

Claim 7. (Original): The implantable graft of claim 6, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

Claim 8. (Original): The implantable graft of claim 6, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

Claim 9. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn density.

Claim 10. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn density.

Claim 11. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn denier.

Claim 12. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn denier.

Claim 13. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn type wherein the different yarn type is selected from the group consisting of multifilament, monofilament, and staple.

Claim 14. (Previously presented): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn type wherein the same yarn type is selected from the group consisting of multifilament, monofilament, and staple.

Claim 15. (Original): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section has a different yarn material wherein the different yarn material is selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

Claim 16. (Previously presented): The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn material wherein the same yarn material is selected from the group consisting

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of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

Claim 17. (Previously presented): The implantable graft of claim 1, wherein said woven portions of said first tubular end, said second tubular end and said bulbous section are seamlessly transitioned.

Claim 18. (Original): The implantable graft of claim 1, wherein said warp yarns and said fill yarns are polymeric yarns.

Claim 19. (Original): The implantable graft of claim 1, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

Claim 20. (Original): The implantable graft of claim 1, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 21. (Original): The implantable graft of claim 1, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 22. (Cancelled):

Claim 23. (Cancelled):

Claim 24. (Original): The implantable graft of claim 1, wherein said bulbous section has opposed edges and the additional warp yarns are threadingly engaged and disengaged at said edges.

Claim 25. (Original): The implantable graft of claim 1, wherein the additional warp yarns are threadingly engaged at different longitudinal locations along a length of said first bulbous end and further wherein the additional warp yarns are threadingly disengaged at different longitudinal locations along a length of said second bulbous end.

Claim 26. (Original): The implantable graft of claim 1, wherein the additional warp yarns are threadingly engaged at different radial locations along a width of said first bulbous end and further wherein the additional warp yarns are threadingly disengaged at different radial locations along a width of said second bulbous end.

Claim 27. (Original): The implantable graft of claim 1, wherein said tubular woven portion is radially crimped.

Claim 28. (Original): The implantable graft of claim 1, wherein said bulbous woven portion is radially crimped.

Claim 29. (Original): The implantable graft of claim 1, wherein said tubular and said bulbous woven portions are radially crimped.

Claim 30. (Original): The implantable graft of claim 1, further comprising a mechanical or tissue heart valve securable attached to said second tubular end.

Claim 31. (Previously presented): The implantable graft of claim 1, wherein said first tubular end or said second tubular end is a multi-lumen tubular structure.

Claim 32. (Currently amended): An implantable, flat-woven graft comprising:  
a hollow tubular woven portion having opposed tubular ends and opposed flat-woven edges, said woven portion having a number of warp yarns interlaced with a number of fill yarns in a flat-woven tubular woven pattern to define a flat-woven tubular diameter; and  
a generally spherical or oblong bulbous woven portion having a greater number of warp yarns interlaced with said fill yarns in a flat-woven tubular bulbous pattern contiguously woven between said opposed ends, the first bulbous end including a textile portion having an increased number of warp yarns at the rate of at least three or more warp yarns for every two of said yarns, while the second bulbous end includes a textile portion having a decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of said fill yarns, wherein the greater number of warp yarns are threading engaged and disengaged with said fill yarns at different spaced-apart locations from the edges along the width of said graft at said bulbous woven portion to define a flat-woven bulbous diameter.

Claim 33. (Original): The implantable graft of claim 32, wherein said bulbous diameter is from about 2 mm to about 20 mm greater than said tubular diameter.

Claim 34. (Original): The implantable graft of claim 33, wherein said tubular diameter is from about 10 mm to about 50 mm.

Claim 35. (Original): The implantable graft of claim 32, wherein said tubular woven pattern and said bulbous woven pattern are selected from the group consisting of a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave, and combinations thereof.

Claim 36. (Original): The implantable graft of claim 35, wherein said tubular woven pattern and said bulbous woven pattern are the same.

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Claim 37. (Original): The implantable graft of claim 35, wherein said tubular woven pattern and said bulbous woven pattern are different.

Claim 38. (Original): The implantable graft of claim 32, wherein said warp yarns and said fill yarns are polymeric yarns.

Claim 39. (Original): The implantable graft of claim 32, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

Claim 40. (Original): The implantable graft of claim 32, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 41. (Original): The implantable graft of claim 32, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 42. (Cancelled):

Claim 43. (Cancelled):

Claim 44. (Original): The implantable graft of claim 32, wherein said tubular woven portion is radially crimped.

Claim 45. (Original): The implantable graft of claim 32, wherein said bulbous woven portion is radially crimped.

Claim 46. (Original): The implantable graft of claim 32, wherein said tubular and said bulbous woven portions are radially crimped.

Claim 47. (Original): The implantable graft of claim 42, wherein said increasing number of warp yarns are introduced at different longitudinal locations along said woven portion.

Claim 48. (Original): The implantable graft of claim 43, wherein said decreasing number of warp yarns are removed at different longitudinal locations along said woven portion.

Claim 49. (Currently amended): An implantable graft comprising:

a flat-woven tubular portion having opposed first and second tubular ends with a generally spherical or oblong contiguous bulbous seamlessly woven section therebetween, said bulbous woven section having opposed first and second open ends, the first bulbous end being contiguous with said first tubular end, said second bulbous end being contiguous with said second tubular end, the first tubular end having a first number of polymeric warp yarns interlaced with a plurality of polymeric fill yarns in a woven pattern to define a first flat-woven tubular diameter and a first woven length, the second end having a second number of polymeric warp yarns interlaced with said plurality of polymeric fill yarns in a woven pattern to define a second flat-woven tubular diameter and a second woven length, and said bulbous section having a third number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a third flat-woven tubular diameter and a third woven length;

wherein said third number of warp yarns is greater than either of said first or said second number of warp yarns to define an additional number of warp yarns; and further wherein said third number of warps yarns are engagingly interlaced at the rate of at least three or more warp yarns for every two of said fill yarns at said first bulbous end and disengagingly interlaced at the rate of greater than three warp yarns for every two of said fill yarns at second bulbous to provide a seamless implantable graft having a third diameter being greater than either of said first or said second diameters.



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Claim 50. (Original): The implantable graft of claim 49, wherein said second number of warp yarns is equal to said first number of warp yarns.

Claim 51. (Original): The implantable graft of claim 49, wherein said second diameter is equal to said first diameter.

Claim 52. (Original): The implantable graft of claim 49, wherein said third diameter is from about 2 mm to about 20 mm greater than said first or said second diameter.

Claim 53. (Original): The implantable graft of claim 51, wherein said first diameter or said second diameter is from about 10 mm to about 50 mm.

Claim 54. (Original): The implantable graft of claim 49, wherein said third length is greater or equal to the length represented by said first diameter.

Claim 55. (Original): The implantable graft of claim 49, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are selected from the group consisting of a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave, and combinations thereof.

Claim 56. (Original): The implantable graft of claim 55, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

Claim 57. (Original): The implantable graft of claim 55, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are different.

Claim 58. (Canceled)

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Claim 59. (Original): The implantable graft of claim 49, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

Claim 60. (Original): The implantable graft of claim 49, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 61. (Original): The implantable graft of claim 49, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

Claim 62. (Previously presented): The implantable graft of claim 49, wherein said additional third number of warp yarns are threadingly engaged at edges of said first bulbous end and threadingly disengaged at edges of said second bulbous end.

Claim 63. (Previously presented): The implantable graft of claim 49, wherein said additional third number of warp yarns are threadingly engaged at spaced apart locations across a width of said first bulbous end and threadingly disengaged at spaced apart locations across a width of said second bulbous end.

Claim 64. (Previously presented): The implantable graft of claim 49, wherein said additional third number of warp yarns are threadingly engaged at spaced apart locations along a longitudinal length of said first bulbous end and threadingly disengaged at spaced apart locations along a longitudinal length of said second bulbous end.

Claims 65- 78. (Canceled)

Claim 79. (Currently amended): An implantable prosthesis comprising:

a first hollow tubular woven portion having a number of warp yarns interlaced with a first number of fill yarns in a flat-woven tubular woven pattern to define a flat-woven tubular diameter;

a generally spherical or oblong bulbous woven portion seamlessly transitioned from said first woven section, said bulbous woven section having a greater number of warp yarns interlaced with said fill yarns in a flat-woven tubular bulbous pattern, said bulbous woven portion including a first bulbous end and a second bulbous end, said first bulbous end including a textile portion having an increased number of warp yarns at the rate of at least three or more warp yarns for every two of said yarns, the second bulbous end including a textile portion having a decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of said fill yarns; and

a third hollow tubular woven portion seamlessly transitioned from said bulbous portion, said third woven portion having a third number of warp yarns interlaced with said number of fill yarns in a flat-woven tubular woven pattern to define a third flat-woven tubular diameter, wherein said greater number of warp yarns of said bulbous portion is greater than said first or said third number of warp yarns.

Claim 80. (Previously presented): The implantable graft of claim 1, wherein said bulbous woven section has a generally spherical shape.

Claim 81. (Previously presented): The implantable graft of claim 1, wherein said bulbous woven section has an oblong shape.

Claim 82. (Previously presented): The implantable graft of claim 1, wherein said third number of warp yarns includes a varying number of warp yarns.

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Claim 83. (Previously presented): The implantable graft of claim 32, wherein said bulbous woven portion has a generally spherical shape.

Claim 84. (Previously presented): The implantable graft of claim 32, wherein said bulbous woven portion has an oblong shape.

Claim 85. (Previously presented): The implantable graft of claim 32, wherein said greater number of warp yarns includes a varying number of warp yarns.

Claim 86. (Previously presented): The implantable graft of claim 49, wherein said bulbous woven section has a generally spherical shape.

Claim 87. (Previously presented): The implantable graft of claim 49, wherein said bulbous woven section has an oblong shape.

Claim 88. (Previously presented): The implantable graft of claim 49, wherein said third number of warp yarns includes a varying number of warp yarns.

Claim 89. (Previously presented): The implantable prosthesis of claim 79, wherein said bulbous woven section has a generally spherical shape.

Claim 90. (Previously presented): The implantable prosthesis of claim 79, wherein said bulbous woven section has an oblong shape.

Claim 91. (Previously presented): The implantable prosthesis of claim 79, wherein said third number of warp yarns includes a varying number of warp yarns.